

REMARKS

In the foregoing amendments, claims 1-3 were amended to more positively define applicant's invention. The amendments to these claims include removing the word "type" from the claims. In the outstanding Office action, claims 1-8 and 14-18 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Official action stated that the word "type" makes these claims indefinite. Since the word "type" was removed from claims 1-3, and does not appear in any of the other claims, applicant respectfully requests that the examiner reconsider and withdraw this rejection. Further, applicant respectfully submits that claims 1-8 and 14-18 particularly point out and distinctly claim the subject matter regarded as the invention within the meaning of 35 U.S.C. § 112, second paragraph. Therefore, applicant respectfully requests that the examiner reconsider and withdraw this rejection.

Attached hereto is a marked-up version of the changes made to claims 1-3 by the current amendment. The attached pages are captioned **"VERSION WITH MARKINGS TO SHOW CHANGES MADE."**

Claims 9-13, 19, and 20 were withdrawn from consideration as being directed to a non-elected invention. Claims 1-8 and 14-18 remain in the application for consideration by the examiner.

In paragraph 6 of the Official action, claims 1-8 and 14-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent No. 5,916,376 of Fukuno *et al.* (Fukuno). The Official action stated Fukuno teaches a Sm-Fe-N alloy having a TbCu₇ structure (col. 3, line 10) and a composition that overlaps the alloy composition recited in the instant claims (col. 2, lines 26-35). The Official action admitted that Fukuno does not teach the same proportions as recited in the applicant's claims, but argued that the instant claims would have been obvious because the alloys taught by Fukuno overlap applicant's claimed alloys.

Applicant respectfully submits that the teachings of Fukuno do not disclose or suggest the invention as set forth in claims 1-8 and 14-18 within the meaning of 35 U.S.C. § 102 or 35 U.S.C. § 103.

The presently claimed invention includes limiting the amount of the Zr or eliminating Zr altogether from the composition. For example, claims 1 and 3 do not include Zr in the magnet alloy. Claim 2 includes Zr in the magnetic alloy in an amount between 0.1 and 1.5 atomic %. In contrast to applicant's claims, the teachings of Fukuno require between 2 and 10 atomic % of Zr. See, for example, tables 1-7 at columns 11-18 of Fukuno. There are no overlapping ranges for the amount of Zr between the presently claimed invention and the teachings of Fukuno. Applicant respectfully submits that it cannot be obvious to either eliminate Zr or reduced the amount of Zr to that set forth in the present claims from the teachings of Fukuno, so as to arrive at the presently claimed invention. How would one of ordinary skill in the art be motivated to

the presently claimed amounts of Zr from the teachings of Fukuno, when the presently claimed amounts of Zr are completely outside the range proposed by Fukuno? For such reasons, applicant respectfully submits that it is impossible for the teachings of Fukuno to motivate one of ordinary skill in the art to the invention set forth in the present claims. Therefore, applicant respectfully requests that the examiner reconsider and withdraw this rejection.

The teachings of Fukuno are characterized by choosing a high Zr-content resulting in the formation of α -Fe in the magnet material and a relatively high roll-speed of quenching molten alloy (spherical speed: 50 m/sec or higher), so that good magnetic properties may be obtained.

On the other hand, the presently claimed invention can use a lower roll-speed (spherical speed: 45 m/sec or less). This is advantageous because the higher roller speed proposed by Fukuno has technical problems in operation, which results in unstable product properties and low yields. The presently claimed invention, by permitting lower roller speed, avoids the formation of α -Fe in the magnet material and suppress a decreasing coercive force. Also, Zr is a relatively expensive material, and therefore, low Zr-content is advantageous from the viewpoint manufacturing costs. For such reasons, it is readily apparent that the teachings of Fukuno and the presently claimed invention are quite different from each other and that one cannot suggest the other.

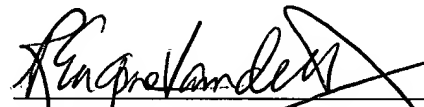
For the foregoing reasons, applicant respectfully submits that the invention set forth in claims 1-8 and 14-18 is patently distinguishable from the teachings of Fukuno within the meaning of 35 U.S.C. § 103. Therefore,

applicant respectfully requests that the examiner reconsider and withdraw the rejection of the claims in this application over these teachings.

In view of the foregoing amendments and remarks, favorable consideration and a formal allowance of 1-8 and 14-18 are respectfully requested. While it is believed that the present response places the application in condition for allowance, should the examiner have any comments or questions, it is respectfully requested that the undersigned be telephoned at the below listed number to resolved any outstanding issues.

In the event this paper is not timely filed, applicant hereby petitions for an appropriate extension of time. The fee therefor, as well as any other fees which may become due, may be charged to our deposit account No. 22-0256.

Respectfully submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claims 1-3 were amended as follows:

-- 1. (Amended) A flaky, isotropic SmFeN powdery magnet material prepared by roll-quenching a molten alloy and nitriding the alloy powder thus obtained to form a magnet alloy; [characterized in that] the magnet alloy [has] having an alloy composition of the formula, by atomic %:

$\text{Sm}_x\text{Fe}_{100-x-v}\text{N}_v$ wherein $7 \leq x \leq 12$ and $0.5 \leq v \leq 20$, [; that the] a TbCu₇ crystal structure [is TbCu₇ type;], and [that the] flakes with a thickness of [the flakes is] 10-40 μm . --

-- 2. (Amended) A flaky, isotropic SmFeN powdery magnet material prepared by roll-quenching a molten alloy and nitriding the alloy powder thus obtained to form a magnet alloy; [characterized in that] the magnet alloy [has] having an alloy composition of the formula, by atomic %:

$\text{Sm}_x\text{Fe}_{100x-y-v}\text{M}^1_y\text{M}_v$ wherein M¹ is at least one member selected from the group consisting of Hf and Zr; $7 \leq x \leq 12$ and $0.1 \leq y \leq 1.5$ and $0.5 \leq v \leq 20$ [; that the], a TbCu₇ crystal structure [is TbCu₇ type;], and [that the] flakes with a thickness of [the flakes is] 10-40 μm . --

-- 3. (Amended) A flaky, isotropic SmFeN powdery magnet material prepared by roll-quenching a molten alloy and nitriding the alloy powder thus

obtained to form a magnet alloy; [characterized in that] the magnet alloy [has]
having an alloy composition of the formula, by atomic %:

$\text{Sm}_x\text{Fe}_{100-x-z-v}\text{M}^2_y\text{N}_v$ wherein M^2 is at least one member selected from
the group consisting of Si, Nb, Ti, Ga, Al, Ta and C; $7 \leq x \leq 12$, $0.1 \leq z \leq 1.0$ and
 $0.5 \leq v \leq 20$, [; that the] a TbCu₇ crystal structure [is TbCu₇ type;], and [that
the] flakes with a thickness of [the flakes is] 10-40 μm . --